

4-24-1975

Marine Orientation in The Republic of South Africa

D. A. Bonvouloir
University of Rhode Island

Follow this and additional works at: http://digitalcommons.uri.edu/ma_etds



Part of the [Natural Resources Management and Policy Commons](#), and the [Oceanography and Atmospheric Sciences and Meteorology Commons](#)

Recommended Citation

Bonvouloir, D. A., "Marine Orientation in The Republic of South Africa" (1975). *Theses and Major Papers*. Paper 24.

This Major Paper is brought to you for free and open access by the Marine Affairs at DigitalCommons@URI. It has been accepted for inclusion in Theses and Major Papers by an authorized administrator of DigitalCommons@URI. For more information, please contact digitalcommons@etal.uri.edu.

Thesis:
BONVOULOIR

MARINE ORIENTATION
IN
THE REPUBLIC OF SOUTH AFRICA

MASTER OF MARINE AFFAIRS
UNIV. OF RHODE ISLAND

D.A. Bonvouloir

MAF. 652

24 April 1975

TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
I. Inputs	2
A Geographic and Location Aspects	2
B Shoreline Length and Coastal Geography	3
C Continental Shelf	4
D Population	5
Map 1 - Population Density	6
E Fisheries	7
F Food Sources	10
IIA Input Processing	13
A Governmental Structure	13
B Perception of Bloc Position	14
C Level of Economic Development	19
D Importance of Navy/Maritime Defense	22
E Level of Maritime Utilization	24
F Importance of Marine Science	26
IIB The Decision Making Process (Value System as Filter)	28
III Marine-Related Decisions	32
A Marine Pollution	32
1. Classification	32
2. Inputs, Filters	34
3. The Decisions	35
4. Discussion of Process	37
B The Shipbuilding Program	38
1. The Decision - Model Relation	39
2. The Decision Process	40
C General Comments on Decision Process	41
IV Outputs	
A Treaties and Agreements	43

TABLE OF CONTENTS (CONT.)

	<u>Page</u>
B Domestic Status	45
C LOS III Position	48
D Naval Activities and Posture	51
E Claims to Maritime Territory	53
F Conflicts	56
V Conclusions and Relationships to Model	58
Appendix I. INPUTS	62
Appendix II. THE MODEL	63
Notes	64
Bibliography	71

INTRODUCTION

Uki cheza na dume,
Uta pata pembe.
Swahili Sage.

A few potential pitfalls were awaiting me in the preparation of this paper. The examination of South Africa's Marine Orientation, (the degree of "turning toward" (Alexander) or dependence on the oceans), focuses on a single area of foreign policy. Further, it is based on an essentially mathematically structured model demanding a degree of objectivity. International relations can be examined objectively only to a point after which subjective criteria determine output in terms of policy.

Related difficulties which I have tried to avoid are:

- a) the perception of Marine Orientation as being a prime consideration within the RSA's general foreign policy considerations,
- b) the development of tunnel-vision conclusions by deriving expected outputs arrived at in reverse; that is, an unconscious tailoring of inputs and processes to fit an extrapolation of future policies.
- c) spelling errors.

I believe most of these have been fairly successfully avoided.

I. INPUTS

A. Geographic and Location Aspects

Located at the southern tip of the African continent, the Republic of South Africa occupies a position of "considerable strategic importance"¹ at the junction of the Indian and Atlantic Oceans between latitudes 22°S and 35°S, and longitudes 17°E at the mouth of Orange River on the Atlantic to 33°E at Ponto do Oro on the Indian Ocean.

Historically this location has been a major influence in South Africa's patterns of development from the establishment of a post by the expanding Dutch East India Company engaged in the Eastern trade where settlement of the Cape of Good Hope, even then, could be seen as "highly desirable for economic and strategic reasons."² Succeeding centuries though filled with shifting patterns of political change, have not decreased the geographical importance of Africa's tip.

In the mid-twentieth century, Spence states "South Africa's ports, and in particular, the Naval base at Simonstown, were extremely valuable to Commonwealth shipping on those occasions when the Mediterranean route was dangerous,"³ while today Cottrell and Burrell pinpoint the closing of the Suez Canal together with increased Soviet presence in the Indian Ocean as major causes for the

"...attention... focused on the security of the shipping lanes that now pass around the Cape of Good Hope."⁴

B. Shoreline Length and Coastal Geography

The 1974 Yearbook of South Africa gives the following statistics on the length of the coastline:⁵

Total Length (Orange River-Ponto do Oro)	2,955 km
Atlantic (West Coast to Cape Point)	872 km
Indian (South and East Coast)	2,082 km

Gamble's Marine Attributes ranks shoreline length as 25th in the world with the ratio ranking of shoreline length to area at 67th.⁶ The coastal belt is described as "even, closed ..with few bays or indentations naturally suitable for harbour construction."⁷

Taken out of context, these statistics would seem to indicate a low level of potential utilization; such is not the case as the full situation develops.

The coastal belt landward of high water varies in width from 3 to 30 miles, having an average elevation of 500 to 600 feet above sea level.⁸

Three oceanic current systems affect South Africa; the two most important being wind generated (Agulhas and Benguella), and largely responsible for both climatic and vegetation differences on the East and West Coasts, as well as the presence of upwelling with the resultant rich fisheries resources lying off the West Coast.

C. Continental Shelf

The continental shelf lying off the east coast is generally quite narrow, ranging in width from 3 to 5 kilometers with an average depth of some 150 meters. The west coast shelf varies in width from 50 to 80 kilometers at a depth ranging from 300 to 400 meters, while the southern shelf extends some 250 kilometers forming the Agulhas bank.⁹

In April of 1963, South Africa ratified the 1958 Geneva Convention on The Continental Shelf thereby accepting the vague but internationally accepted definition giving "the coastal state sovereign rightsfor the purpose of exploration and exploiting its natural resources." The limits under the convention are "a depth of 200 meters or, beyond that limit, to where the depth of the super adjacent waters admits of the exploitation of the natural resources of said areas."¹⁰

The following table illustrates territory in km² which would fall under RSA's jurisdiction according to various alternative seabed control regimes¹¹ proposed:¹¹

<u>Limit</u>	<u>200 meters</u>	<u>40 N mi.</u>	<u>Margin Edge</u>	<u>200 N mi.</u>
Area	108,250 km ²	147,600 km ²	475,800 km ²	767,900 km ²

It is interesting to note here that Walvis Bay, the principle port of the hotly contested territory of South

West Africa was included under South Africa's statistics, while South West Africa itself was listed separately. Although accurate in terms of political control, these figures would seem slightly misleading from a strictly objective point of view. The implications of this subject will be treated under claims to Maritime Territory.¹²

D. Population

The census of 1970 showed the following breakdown of the population:¹³

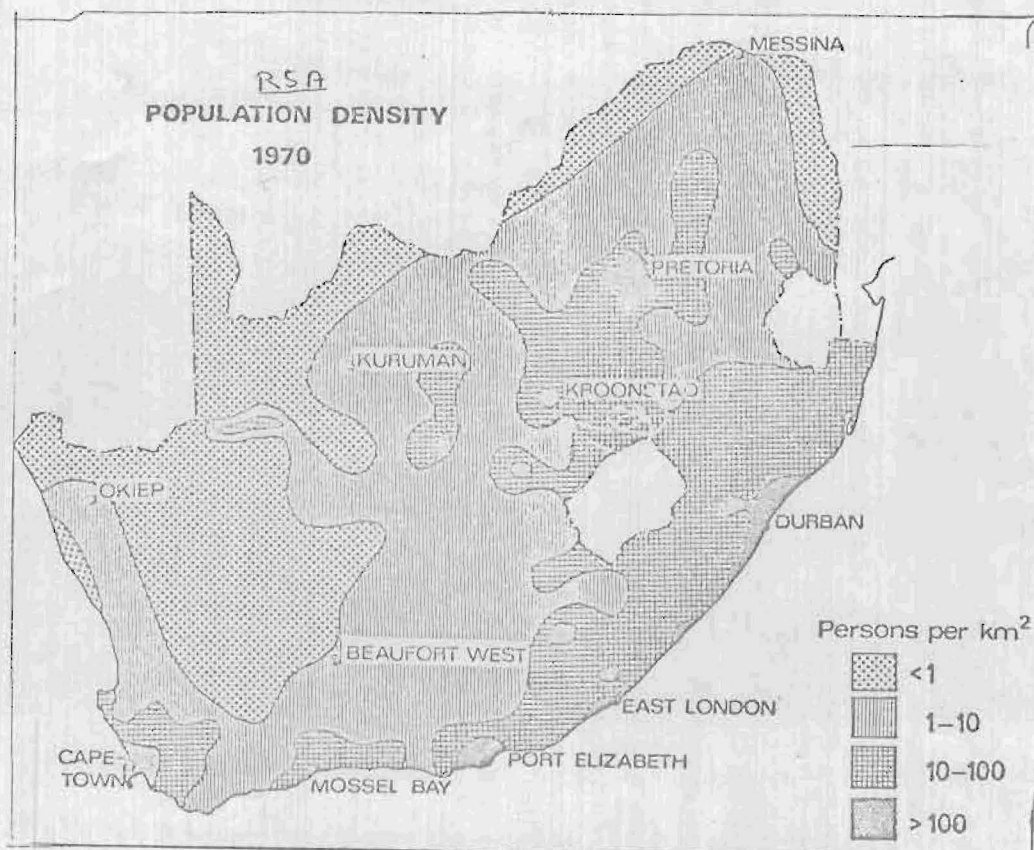
<u>Group</u>	<u>Numbers</u>
Blacks	15,058,000
Whites	3,751,000
Coloureds	2,018,000
Asians	620,000
Total	21,477,000

<u>Group</u>	<u>Annual growth ratio</u>	<u>%Increase since 1960</u>	<u>% of Population</u>
Blacks	36.3	3.7%	70.2%
Whites	22.4	2.2%	17.4%
Coloureds	32.3	3.3%	9.4%
Asians	28.7	3.2%	2.8%

The overall growth rate was 3.4%.

Map 1 shows the heavy concentration of the total population around the major urban centers, over half of these located on the coast. Some 47% of the black population reside in the Bantu homelands, while 53% live in

MAP 1:



Source: Official Yearbook
of the RSA.

white South Africa. The majority of coloureds live in Capetown (87%), the majority of Asians in the Durban vicinity (+80%) while the white population is concentrated on the plateau along the south and east coast.¹⁴

In 1960 roughly four-fifths of the white, coloured and Asian populations were located in urban areas, the figure probably approaches 90% today, while the black urban oriented concentration is probably approaching 45-50% of the black population, although this information is not readily available.

It is difficult to make any definitive statements tying coastal demographic patterns to the marine orientation issue, other than the fact that some 47% of industrial output is destined for trade or shipment, thereby making coastal trade processes a vital link in the welfare of the coastal settlement patterns.

E. Fisheries

The 1972 FAO Yearbook of Fisheries Statistics lists South Africa 15th in terms of total catch in 1971-72, having been 7th in the years 1967/68/69, 8th in 1970 and 14th in 1971.¹⁵

<u>Year</u>	<u>1965</u>	<u>1968</u>	<u>1970</u>	<u>1972</u>
Catch	1238.7	2045.3	1562.2	1123.3

('000 m. tons)

The decrease in total catch since 1968 is firm evidence of Christie's statements of the effect of some twenty distant water fishing fleets' catch increase of nearly 500% in the past decade.¹⁶ Although the department of fisheries view of 1970 that "increasing indications ...are showing signs of diminishing returns per unit of effort," pronouncements have become somewhat more optimistic in 1974's "recovery of the fish stocks (with) landings up to expectations, prices firm and profits improved..."¹⁷

In a 1973 article, SASN & IR* questioned the effectiveness of ICSEAF¹⁸ mesh regulations and alluded to "more realistic conservation measures" discussed earlier in the article. These took the form of suggestions of a powerful Canadian Association urging "more active management ...tougher quotas and control of the fishing grounds by the coastal state."¹⁹ Further reference was made to expected effort at reconciliation by USA, Canada, Australia, and New Zealand at LOS III regarding extreme claims of Iceland and South American states into a "wider jurisdictional formula."²⁰ This is the first mention I have come across regarding a possible acceptance by South Africa to an extended jurisdictional claim in excess of the tightly patrolled "fishing zone of 20km maintained along the entire coastline."

* "South African Shipping News & Industry Review"(Periodical)

Although Friedheim's²¹ study of the '58 and '60 LOS conventions (utilizing a rotated factor matrix to identify significant conflict issues), placed the RSA's voting pattern on fishing controls on the negative side, statements at the Caracas convention strongly indicate a change of position for the reasons previously mentioned:

" . . . South Africa as a major fishing country has a vital interest in the concept of the exclusive Economic Zone especially with regard to fisheries.
 . . . We have been particularly impressed by the positive and realistic stand taken by many of those States who find themselves in a position where their natural living marine resources are being depleted by foreign vessels, with little or no regard to rational exploitation.

(South Africa) therefore supports the right of a Coastal State to adopt adequate conservation measures to ensure the enforcement of its control regulations within the Zone, including, where necessary, the impounding of foreign vessels and the prosecution of their crews in the courts of the Coastal State."

22

F. Food Sources

Because of erratic or inadequate rainfall, only about 15% of the land surface is suitable for arable farming, however, an ambitious project on the Orange River presently under construction is eventually expected to increase the total irrigated area by 40%, bringing the arable total to a bit over 17% of the land area.²³

Despite the limited availability of arable land and the 20% rise in domestic food consumption over the last two decades, the RSA is virtually independent of the outside world for her food needs, with only 2% of food-stuffs being imported. FOB agricultural export earnings were second only to gold in 1971-1972, amounting to some \$805 million in 1972 or approximately 12% of the GDP.²⁴

G. Seaborne Trade ²⁵

Total cargo handling in 1972 amounted to some 53.5 million tons, principally in the ports of Durban, Cape-town, Port Elizabeth, East London, and Walvis Bay. Cargo landed, or import cargo, declined some 6% while export cargo increased by 12.5%. Roughly 76% of export cargo tonnage was in the form of bulk (ores etc.) with the remainder being general goods and agricultural products.

Discounting gold and diamonds which are usually shipped by means other than ships, total value of exports by sea in '73-'74 was approximately \$5.5 billion,²⁶ while

latest estimates show base metal earnings alone (copper, chrome, iron, & nickle) are expected to exceed \$5.6 billion in '74-'75.²⁷ The overall seaborne trade figure for this period will probably be in excess of \$7 billion, equivalent to 30-35% of projected GNP. "Apart from trade with countries of the South African region, and limited (high-value) transport of merchandise by air, all South Africa's trade is through its ports."²⁸

Thus, while South Africa is classified by Johnston and Gold as having a "low relative interest in shipping,"²⁹ (re fleet building and investment), and has experienced several rather unprofitable ventures into the development of a local shipbuilding industry, and "a more realistic approach has led to slower development, but to sound consolidation of the industry,"³⁰ it is obvious that the Republic's economic welfare is tied directly to the efficient operation of marine related industries.

Another relevant factor is the vast increase of visits by ships being diverted from the Suez, resulting in "a rapid increase in earnings from port services (over \$61 million in 1970), the creation of an important market in South African ports in respect of ships' supplies, and the promotion of South Africa's trade" ³¹ Although not a permanent situation, the closing of the Suez Canal has provided a windfall for port development which is now proceeding apace, particularly in the field of new

deep water port development (esp. Richard's Bay), and the modernization of existing facilities for containerization and roll-on, roll-off type cargo handling. This subject will be touched upon under Level of Marine Utilization.

IIA. INPUT PROCESSING

A. Governmental Structure

In a very narrow context, the governmental structure of South Africa must be considered pluralistic in nature, however narrow the spectrum of interests served.

In principle, the major locus and absolute source of governmental power is in the national Parliament, (the President, the Senate and the House of Assembly), "having full power to make laws for peace, order, and good Government of the Republic."³² Certain limits have been placed on the power of those branches to the effect of concentrating absolute power in the hands of a few. Curtis maintains that although "the appearance of democracy has been maintained, the real power is in the hands of a dozen men."³³

While formally holding the central position of power in the executive branch, the office of State President has very little actual political power since his vested powers can only be exercised through the Cabinet of Ministers, the real executive power of the government. The cabinet, or Executive Council, is composed of the Prime Minister (the actual head of Government), and some eighteen Ministers heading up the various sectors of the government bureaucracy. "The great powers of the Executive Council derive from its control, sanctioned by custom as well as provided for by the Constitution."³⁴

being able to override actions of the State President, and more important, to control the majority (members of the Nationalist party) of the House of Assembly through rigid enforcement of rules of party discipline, including an oath of allegiance.

Members of the House of National Assembly, (the origin of all money bills), and of the Senate (a house of review), must be White, South African citizens, and residents of the Republic for at least five years.

In terms of matters directly concerning marine orientation, the ministers involved in the decision-making process number six, being the Prime Minister, and Ministers of Transport, Defence, Water Affairs, Planning-Environment & Statistics, and Health. Any major decisions regarding the marine environment would most likely originate within this group.

B. Perception of Bloc Position

In an essay dealing with South Africa's so called "Outward Movement," or attempt to create a multi-nation community of cooperation with her immediate neighbors, Larry Bowman stresses the point that the ultimate aspiration is to establish "an economically and militarily strong South Africa surrounded by client states, befriended by the Great Powers, and geographically isolated by any significant enemy." ³⁵ Barber supports this

contention by noting that, in the late 1960's, South Africa was able to mold a bloc of southern African states in which the RSA was a dominant power." 36

On the other hand, Prime Minister Verwoerd in 1963 claimed "South Africa is unequivocally the symbol of anti-communism in Africa, (and), although often abused, a bastion in Africa for Christianity and the Western world." This sentiment was echoed in 1967 as Prime Minister Vorster spoke of "two things South Africa would not tolerate: Communist domination in Southern Africa and terrorism," 37 and re-echoed in the State President's opening of Parliament Address of 1972 regarding subversive elements "in various guises, and communists (being) bent on the downfall of our existing and orderly government." Further, "the Russo-Chinese threat against the Western Alliance . . . necessitates the protection of the Cape Sea Route against Communist domination, for which purpose South Africa is prepared to contribute its share." 38 The message goes on to discuss joint naval exercises under the Simonstown Agreement being discussed with the UK.

The Soviet buildup in the Indian Ocean most certainly has not escaped the notice of western-alliance defence strategists and that "effective defence of these lanes of commerce demands active cooperation with the government of South Africa," 39 while Smit, in his discussion of that Soviet buildup refers to the "vital role of South Africa

can play in Western defence strategy." ⁴⁰

Clearly then, the decision makers are attempting full development on two fronts at establishing a viable 'bloc' position. One necessarily includes appeasement of the extremely hostile black African states north of the RSA through the "outward movement," while the other seeks support and recognition from the western powers both from the approach that the strategic position of the RSA is vital to Western security considerations, and that the Republic has indeed recognized the need for change in her attitudes toward the black race. Recent 'break-through' negotiations involving Southern Rhodesia, members of the OAU, and various liberation movements, would also indicate this drive on two fronts.

At this moment, despite suprising developments, the RSA appears not to be in a particularly positive position with either effort, but anything would be an improvement over its position of preceeding periods.

Due to the East/West confrontation in the Indian Ocean, relations with western alliance naval powers may improve from what Duggan calls an ad hoc association, an "ambivalent, sometimes schizophrenic jumble of day-to-day determinations," to a program of balanced equations, "a combination of carrots and sticks, of pressures and counter pressures," ⁴¹ as a consequence of this threat's immediacy as perceived by western military strategists.

The regional front is not as well defined, and is currently in a state of flux rather unprecedented in the history of southern Africa. Many theorists recently saw the change of status afforded the Portugese territories, especially Mozambique, as being a permanent damper to any further advances of the so called outward movement, such may not be the case. A host of clandestine and open meetings between several of the black alliances' top leaders (Frelimo's Samora Machel, Bishop Muzorewa of the African National Council, Kenneth Kaunda of Zambia, Rhodesian black leaders Nkomo and Sithole, among others) followed Portugese-Frelimo agreements on Mozambique's independence, while an officially unconfirmed meeting of the RSA's Vorster with presidents of the Ivory Coast, Senegal, and Gabon, and Vorster's promised "six months of change" speech (November 1974) give the feeling of a sizable undercurrent of change beneath official positions. Even more suprising was a speech given before the UN by RSA's PiK Botha on October 24, 1974 stating "(my) country would do everything in our power to move away from discrimination based on race or coulour." 42

A new era is dawning in Africa, . . . and it includes a Southern Africa made up of a number of independent states with close economic ties. Africa will accept the realities of the age, and South Africa will accept them with Africa.

43

In spite of the continuing top-level negotiations, many feel that the whole thing is a hoax; Kenya's incredulous

Daily Nation expressed doubts; "... little faith can be placed in what may have only been a diplomatic feint,"⁴⁴ or, as Spence states in reference to similar capework in the past, "liberalism abroad, repression at home."⁴⁵

What emerges, then, is no bloc position at all, with less than a 50% chance at the acceptance of either group without drastic changes in evidence. From this situation, although South Africa, with similar interests common to many coastal states regarding maritime policy, is attempting a consolidation with immediate neighbors, the greater proportion of trade and economic dependence on the more developed countries will result in a low-profile, following approach concentrating on the desires of those trading allies.

C. Level of Economic Development

To merely apply an arbitrary value as to Level of Economic Development would serve little purpose in a prediction of future maritime policy as "the state of comparative social and political stability and the maintainance of law and order...is the sine-qua-non for sound economic growth."⁴⁶ The growth rate maintained from 1955 to 1970 in South Africa was one of the highest in the world, averaging 5½-8%, depending on indices used. This was due to (the ineffectiveness..."despite the international drive for economic sanctions and boycotts), (the RSA's) trade pattern has expanded in every sector of the world."⁴⁷ Clearly, a solid base must continue to exist if the "level" is to be maintained. As Rostow cautions "we... believe that an understanding of the relationship between capital formation and economic growth demands, at some stage of our analysis, we bring to bear on the relevant economic variables...the social, political and cultural forces which affect their net movement."⁴⁸

This caveat in mind, the general level of economic development might be described as a fairly sophisticated industrial, mineral, and agricultural based, expanding, government monitored, capitalistic free enterprise system. GNP, at \$21 billion in 1974, ranked about 25th in the world, with GNP/Pop. at \$839/a being perhaps 60th-65th.

The very strong influence of gold and diamond earnings has provided a constant and sizeable source of export income, and has been instrumental in the expansion of other mineral, agricultural, and industrial sectors of the economy. A phenomenal growth rate slowed perceptibly in the early 1970's, with inflation, unemployment, and relatively large increases in consumer food prices. The year 1970 has been called a "turning point" for the South African economy as the sharp industrial and general economic growth of the last 15 years caused the economy to become overheated with domestic inflationary pressures increasing rapidly. Despite capital shortages and the relative increase in price of imports, (causing a serious trade imbalance in 72-73), gold once again took up the slack. The post mid-1973 "revival in domestic economic activity gained momentum, and it remains the government policy to encourage such growth, provided this is not inhibited by international developments. A further strong upsurge can be expected in 1974."⁴⁹

This picture together with the fact that "broad economic boycotts of South African products (are) 'ineffective' or 'counterproductive,'" ⁵⁰ should mean a rosy future for the maritime effort of South Africa, especially with Zambia's Kenneth Kaunda urging "accommodation and economic cooperation among the regions nations."⁵¹ Perhaps. External and exogenous forces ("Umwelt") are currently wreaking havoc

amongst the world's shipping nations, especially with regard to ships involved in oil transport. Investment pending by South African marine on two VLCC's (217 and 266 thousand dwt. tons) of some \$56 million could mean a total loss for SAF Marine, the RSA's largest shipping company, unless oil is discovered in South Africa itself.

However, barring any overnight upheavals (a remote possibility), the entire level of economic development and growth seems in no immediate danger, and, in fact should enjoy a 'reasonable' rate of expansion of 4.5-6% over the next 5 years.⁵²

The process and implications of the governments decision to become actively involved in shipbuilding will be briefly discussed under decision making.

Also of interest is the breakdown of major trading partners of the RSA, excluding gold.

<u>Country</u>	<u>65/74 %Exports from SA.</u>	<u>65/74 %Imports Supplied</u>
UK	34%-27%	28%-23%
USA	9-8%	19-16%
Japan	7-12%	11-10%
F.R. German	5-7%	6-14%
Bel./Lux	4-N/A	4-N/A
Italy	4-N/A	3-N/A
France	3-N/A	3-N/A

53

Vagueness of specific trading figures in 1974, permit only

a generalization that South Africa's heavy dependence on the UK as a trading partner seems to be declining with the slack being taken up by increased exports to other Western European countries. A major import jump from the U.S. is also obvious. The development of an efficient South African merchant fleet would further strengthen the RSA's trading position if oil fuel is not completely shut off by non-sympathetic mid-eastern countries.

D. Importance of the Navy/Maritime Defense

"The South African Navy shares responsibility with the air force for the maritime defense of the country and the protection of its maritime interests." ⁵⁴ In 1973 total defense spending exceeded \$660 million, an increase of some \$191.8 million over 1972, and a \$340 million over expenditures of 1965. Although viewed by many critics as "staggering," and "out of proportion," the figure is a relatively small 3.6% of the estimated 1973 GNP, ⁵⁵ and does not seem particularly disproportionate considering the numerous exogenous pressures perceived by SA decision makers as threatening the republic.

Barber states "in a decade the RSA had revolutionized her military capacity, and, in the context of Africa become a major military power," ⁵⁶ and in the 1974 opening of Parliament, the State President's address emphasized: "our policy of non participation in the disputes of others is traditional and well known," and further on, "the equipping

and training of the South African defense force for its defensive role are being continued. In the field of armaments manufacture, the Republic is fully self sufficient in respect to most of its requirements."⁵⁷ Both statements are accurate, and, considering the strength of those forces, the RSA would prove to be a formidable adversary in the types of activities being considered by various black freedom movements.

Military strategist Charles W. Petersen straightforwardly states "overall, the South African Navy is powerful enough to protect the country's shore line against most probable adversaries in Africa," but also attaches the caveat that "in the event of large scale conventional war, the superiority of South Africa's navy would be of little consequence for such an inland campaign," but "the day of a major African invasion of the south... still seems both distant and problematic."⁵⁸

According to the International Institute for Strategic Studies, Naval personnel strength stands at 2,500 regulars, with major equipment being 3 new French built Dauphine class submarines, 2 destroyers with WASP ASW helicopters, 6 ASW frigates, 1 escort and 10 coastal minesweepers, 5 seaward defense boats, and replenishment tankers. The air force of 5,500 regular men, is equipped with 2 squadrons of 16 Mirage fighters, and a host of other murderous goddies.⁵⁹

Without going into detail, it is enough to surmise that the Navy together with the Air Force presents a very considerable deterrent to any nation or group of nations outside of the great powers to attempt a disruption of the maritime areas of South Africa, and obviously, the Republic no longer must rely on the "protection of the Royal Navy against the threat of external attack by sea"⁶⁰ as was the case during and immediately following WWII.

E. Level of Maritime Utilization

The South African shoreline is described as having few bays or natural inlets suitable for harbour construction, however "most observers would admit that the building and expansion of South Africa's major harbors... has been spectacular."⁶¹

The port of Durban... is now rated as the largest on the African continent, possibly the twelfth busiest in the world. Recent expansion of the RSA harbour facilities have included new berths, deepened channels cargo handling equipment, repair docks, and storage facilities. 62

Richards Bay, north of Durban, is a major effort at the creation of a complete, planned city/port, involving the dredging of a naturally-filled harbour. With work standing at 3-5% complete, this complex will be able to handle any super-tanker afloat. Saldahna bay, near Capetown will specialize in the export of iron ore and minerals. Major expansion

is also taking place at Capetown, East London, and Mossel Bay.

The Annual Report of the South African Railways and Harbors shows total capital investment in 1973 of \$253 million, up 17% from 1972, and 44% from 1965. Surplus of earnings over gross working expenditure for harbors stood at some \$45 million in 1973, after interest charges and miscellaneous expenditure - \$38 million.⁶³

SAF Marine, the largest by far of over-sea shipping companies, owns, operates, and charters some 55 vessels, which contributed some \$44.8 million toward net visible foreign exchange earnings in 1973.⁶⁴ Of the 925 ships totalling over 531.8 thousand tons in SA's ship's register, 67% are operating in international trade. In the past ten years the number of South African ships has more than trebled.

Containerization and advanced modular transport capabilities, according to the February 1975 Nautical Magazine is receiving tremendous interest with an order by SAF marine of 4-42,000 dwt. ships from France, at a cost of nearly \$180 million. Investment in expansion of container facilities amounted to over \$315 million in 1974 aimed at the RSA-N. Europe trade.⁶⁵ Investment in 1974 (including 2 huge salvage tugs @\$15.4 million) on new large shipping totalled over \$550 million or 2.3% of GNP, nearly equal to defense spending. Many of these

expenditures are amortized over a period of 20 years, the comparison to defense spending is still interesting.

There seems to be no question that the RSA sees efficient and modern cargo handling not only as a kingpost for her own economic development but also a key factor in its perceived role as economic strongman for the future South African region. Graham Allison's warning regarding strategic considerations notwithstanding, a concerted investment effort of the magnitude described clearly indicates a desire for maritime control of a (peacefully) advancing southern African economy.

The RSA's expanding capabilities in marine transport, may well be part of a high-level decision in line with a late 1973 utterance of the Minister of Police "that conventional weapons and methods are not the final answer.. (that) South Africa will have to make use of improved economic relations and international cooperation;⁶⁶ or, it could be a smoke-screen with continued domination of military, social and economic spheres of the region being the jackpot-which also involves high-level decision makers.

F. Importance of Marine Science

Oceanography, in a wide variety of disciplines, has attained a relatively high degree of sophistication in RSA, with an estimated \$3 million spent in 1972 on government-supported research. Although not a massive program,

it appears to be an extremely well coordinated effort involving government, private industry, and many first rate academic institutions, involving some 40 organizations.⁶⁷

Recognizing that a "systematic study of the sea would bring results as reliable and as useful to industry as any other aspect of science, emphasis has been spearheaded by the S.A. National Committee for Oceanographic Research (SANCOR), to develop a close partnership between science and administration."⁶⁸

As a good deal of research involves the fisheries; an extended economic zone of 200 miles may well prove the worth of the present research effort as modernization of the fishing effort combined with a decrease in foreign fishing and close attention to fisheries yield limits takes place thereby considerably increasing the already respectable tonnage catch of the fleet.

III. THE DECISION-MAKING PROCESS (VALUE SYSTEM AS FILTER)

"THE MODEL" schematically places "Value System of Decision Makers" in a subset of the decision making process through which so-called filters (eg. Level of Economic development, Governmental Structure et al) operate thereby determining the type and direction of decision process utilized. It is important to understand that the value system per se is not mutually exclusive from those filters; rather is in itself a major determinant through historical behavior patterns of what constitutes the weighted perception of the input part of the model. In South Africa's case, this fact was evident in that the statistical evaluation of such things as GNP, population, etc. were sometimes subject to the other-than-objective interpretation of those preparing the figures. Because these forces also were evident in other states' evaluation of internal and external processes of the RSA, caution must be exercised in an analysis of this sort in order to strike a balance most closely approaching an unbiased evaluation.

Another important consideration here should be the disproportionate weight relating the decision-making process to strategic goals of the state, although Graham Allison feels that "most analysts devote little time to the procedures and struggles which occur within the 'black box' of the national security bureaucracy." ⁶⁹

The discussion of theories of international decision making is far beyond the scope of an effort to determine a state's foreign policy, however considering the extreme importance of such a decision process to the immediate future of South Africa, some attempt should be made to define the priorities of both internal and external political action. We have seen the development of an African "superpower" both in a military and economic sense. The nature of the power structure behind this development is not such that it is immune to those from whom it derives power, no matter what the capabilities of self-preservation in the short run. "While Morgenthau seeks to explain national action by reference to a single goal, Aron argues that governments pursue a spectrum of goals, tempered by the 'risk of war (that) obliges it (the government) to calculate forces or means.' " ⁷⁰ From the little I have read of these two major theorists, one is expressing the broad spectrum in terms of one goal, while the other (Aron) tries to be more specific. Barber, while not in the same class, seeks to define a state's foreign policy within four categories:

- a) state survival,
- b) preservation and promotion of particular values,
- c) wealth maximization
- d) the ability to influence other states. 71

The Republic of South Africa has survived to date, it has survived at a wealth maximizing level for the few it truly

represents, and has, until recently, preserved and promoted the value system responsible for the development of the apartheid structure; described by one heavy-handed critic as "an elitist ideology advocating racial separation and the entrenchment of white domination . . . and established an authoritarian racial hierarchy."⁷² While tending to agree with this view, I find it really has no place in the examination of marine policy, regardless of the importance of domestic foundations which determine the survival of any state. "Rationality," says Bostwick Ketchum, "is a relative matter subject to the basic values of the decision makers."⁷³ The controlling minority in any state must adhere to a certain value system in order to preserve that state's existence. Any changes of a drastic nature either mean wholesale destruction of the cancer together with the patient, a pyrrhic victory at best, or by virtue of an incredible set of circumstances (a cohesive, coordinated, cooperative movement with humanitarian motives and a strong leader), a smooth transition from the status quo to a new system. Reasonably, one must expect something of a compromise; it is the purpose of a discussion of the "filters," or non-quantifiable influences interpreting and carrying out state policy based on their perception of both the ultimate goals of that state and the objective inputs (attributes defining a state's position at any given time) to determine a definable direction in the short run. Any extension of the time period becomes

a matter of conjecture, the accuracy of which must decrease
in terms of specifics.

III. MARINE RELATED DECISIONS

A. Marine Pollution

1. Classification

According to Copeland's three classifications of decision types, the RSA's fairly recent (1972) statement of intent to become actively and aggressively involved in pollution control cuts through all categories at one time or another. In the words of the government introduction to the big push "it is necessary to revise and extend existing legislation, particularly with a view to greater efficiency and uniformity on a country-wide basis." ⁷⁶ This would make the decision an administrative one in that the framework for the control of marine pollution already existed under broad interpretation of:

- a) The Sea and Seashore Act 21 of 1935, "to prevent or regulate the deposition or discharge . . . in the sea . . . of anything liable to be a nuisance or danger to health." (Art. 3-1)
- b) The Natal Ordinance 19 of 1958, "to prevent pollution of waters by dumping of solids, liquids, and gases which are likely to injure fish or fish-food." (Art. 26 & 32)
- c) The Water Act 54 of 1956, "to control discharge into the sea . . . so as not to injure fish and other aquatic life . . . (nor) render the water unfit for any purpose; . . . to control use of seawater for industry . . ." (Art. 11 & 12)
- d) The Public Health Act 36 of 1919, "to maintain public health in relation to sea and seashore, prevent the disposal of bilge or other water on

77

board ships." (Art. 7-1)

A general decision could be considered in that the new laws produced far exceeded the limits of those acts enumerated:

- a) Prevention and Combatting Pollution of the Sea by Oil Act 61 of 1971, and amendments thereof, "to prevent oil pollution of the sea . . . in the territorial and fishing zones; and establish an Oil pollution prevention Fund" (Art. 4(1)b, 9(1))
- b) Sea Fisheries Act 58 of 1973, "to prevent pollution entering the sea which would injure (sealife), or hinder the catching of fish, or change the ecological balance . . ."

78

Finally, from the manner in which the issue was presented at the opening of Parliament on 2nd February, 1973, it appears that the pollution problem was at a crisis stage and should be treated as such:

Man's sudden awakening to his relationship with the environment . . . is one of the striking phenomena of our time. Environmental problems in their widest sense are approaching a critical point, and appeals are being made from all quarters for a closer study and immediate action on these issues.

79

This particular address went on to take up some 15% of the opening of Parliament Address, equivalent to the State of the Union Message in this country, which indicates that a decision was made, and at a very high level. Following is a general idea of what was involved in the process itself, adhering to model parameters as closely as possible.

2. Inputs, Filters

Direct input considerations specifically mentioned by the State President as responsible for the situation described in the address were:

- a) South Africa's shoreline length relative to total land area,
- b) Geographical/Oceanographic consideration of major current systems transporting pollutants together with unfavorable sea conditions around the Cape of Good Hope,
- c) Existence of the great oil trade routes in close proximity to the shore of the RSA and the trebling of use since the 1967 Suez closure,
- d) Disasters already occurring - most notably the Sivella (1968), Esso Essen (1970), and the Wafra (1972),
- e) Inability of existing legislation to deal with the problem, and
- f) Increasing population.

Model filters actively supporting (or multiplying) the President's contention of the perceived need were, as I see them:

- a) potential damage to economic enterprises,
- b) the need for a stand on a world-wide non-controversial issue due to lack of anything resembling a bloc position in the world community,
- c) the relatively advanced state of marine technology together with adequate funds, and its ability to deal with pollution oriented problems.

3. The Decisions

From government literature covering the subject of general pollution, pressure for either more active enforcement of existing legislation or creation of more stringent legislation appears to have started building at the urban and local coastal levels in the year 1967. Much of the urging originated from what the government described as "public, press, and radio." Reaction of this sort is very similar to parallel movements going on in all the industrialized countries. Marine pollution in particular was seen as a more vital issue due to the nearly 60% increase in tanker traffic mentioned. Both the size and number of vessels created both a demand for efficient, well-equipped servicing facilities, and means of dealing with potential long-term hazards of massive spills; long-term, as it will be decades before the Suez will be able to accommodate ships with 100 foot drafts.

The Sivella incident prompted the formation at cabinet level of ad hoc and action committees for solution studies. Whether action was precipitated by a multiple advocacy approach at the local level, or initiated as a result of high-level perception, it is difficult to say. Subsequent action was not carried out in a crisis atmosphere, however, a broad range of strengthened enforcement of existing legislation, together with a dynamic and comprehensive program of new legislation was introduced into law within a relatively short period of time. Concerning marine

pollution controls of an international nature, the following resulted:

- 1970; a voluntary system of sealanes was established with special attention to oil cargoes. In excess of the 12 mile territorial limit and in cooperation with IMCO and the International Chamber of Shipping, the South African government asked that any ship carrying in excess of .5 of 1% of its dwt tonnage stay 20km outside straight baselines drawn from only 9 points on the 2900 mile coastline.
- 1971; Act 61, Prevention and Combatting Pollution of the Sea by Oil, and amendments including more stringent enforcement measures in '72 and '73.
- 1971; A major reorganization of government structure for dealing with all aspects of pollution.
- 1972; 15% of an opening speech in Parliament devoted to the pollution issue, strong reference was made to South Africa's presence at the UN conference on the Environment at Stockholm.
- 1973; Sea Fisheries Act 58 (Art. 13-1-g, 16-1-j) .
- 1974; August, South Africa's first contribution to a Law of the Sea Conference, although well represented at all LOS preparatory sessions and conventions. The statement referred to: "our present inability to prevent or control shipbased pollution along our coastline . . . due to the inadequate present day international arrangements especially with regard to coastal state jurisdiction." Furthermore "(the RSA) believes that internationally agreed marine pollution control standards and criteria, based

on sound scientific facts are prerequisites for effective control , (and) my delegation believes that only with strong and effective coastal state enforcement powers can we ever hope to prevent and control marine pollution." 80

4. Discussion of Process

The mention of "so many private bodies taking an interest in the problem," of the President's address and the preceeding reference to the urging of "public, press, and radio," indicates an effort of local and national advocacy pushing for new legislation outside of the government decision-making machine. Major reorganization of the governmental infrastructure along with an estimated \$70 - \$100 million investment suggests a very sympathetic ear at the ministerial level.

In seminar presentation of the process leading to national action on the pollution problem, I emphasized the international appeal of such an effort, my contention supported by a good number of slick pamphlets readily supplied by the Department of Industry complete with 8 x 10 glossies and flow-charts suitable for framing. No doubt a certain amount of potential exists for the RSA in a heavy emphasis on the progressive nature of far-reaching environmental legislation, but these, I believe are secondary to the real dangers posed by heavy super-tanker traffic.

The legislation with which I am familiar indicates enactment of measures exceeding a satisficing level; general

agreement by industry, (white) population, media, local and national government regarding necessity has pre-empted extensive debate on the issue itself to the manner of its implementation and the resulting excessive financial burdens falling on the coastal and urban centers.

It appears that during 1971, a decision covering the general pollution effort was made to push forward with extensive revamping, reorganization, and redefinition covering both the wide and specific issues; communications and action between all levels was evident and emphasized.

In retrospect, I would say, despite the limited advocacy in terms of representation of all population groups, that good use was made of the infrastructure and little evidence suggested a power play from the top of the governmental pyramid.

B. The Shipbuilding Program - A limited, General Decision.

South Africa, while not even approaching the status of maritime power in reference to merchant shipping capacity according to Lloyd's Register of Ships, still depends on the business of shipping for her economic survival. For that reason, some sort of decision process with regard to this most important link to marine orientation should be discussed. As mentioned under Seaborne Trade, lack of specific information demands brevity on this subject.

1. The Decision and Model Relation

The initial general decision for the development of a flag fleet took place following the second World War "when it was decided that South Africa should have its own merchant fleet." 81

Inputs specifically mentioned as bases for the cabinet level decision were:

- a) rapid post-war industrial development leading to increased demand for maritime facilities,
- b) inadequacy of existing facilities to meet the increase,
- c) the high freight rates prevailing immediately after the end of the war,
- d) (not mentioned but probably the overriding consideration), the strategic advantage of not having to depend on foreign sources for bottom charters and purchases.

Despite initial statements and rapid growth of onshore cargo handling facilities, shipbuilding did not attain capacity for construction of vessels exceeding the 1000grt size until the State-appointed NORVAL commission "recommended the establishment of a large scale industry" towards the end of 1963. Subsequently a "Government-supported subsidy system was introduced at the end of 1966 enabling the RSA to compete with the rest of the shipbuilding world." 82

Basically the government contributes 35% of the cost of ships exceeding 6000grt, and 25% of ships of the 500 - 6000 grt class, with state credit facilities available at low interest

for 80% of construction costs.

The Industrial Development Corporation or IDC, established in 1940 by an Act of Parliament, is a mainspring of the financing of shipbuilding growth.

2. The Decision Process

For obvious reasons of capital requirements, the decision regarding the initial jump into state-supported shipbuilding involved only a few people in government and industry, and, "for reasons of strategic self-sufficiency as well as industrial development, the government wishes to promote the expansion of the domestic shipbuilding industry." ⁸³

With an industry established as a perception of strategic necessity, one would think that the range of action would be well above the satisficing level. This has not been the case due to the extreme complexity involved when establishing an extremely heavy, capital-intensive industry competing with efficient operations of heavily industrialized maritime nations with decades of experience and technology to draw upon. As late as 1969, the industry was in dire straits, necessitating the "more realistic approach" mentioned under Seaborne Trade.

The long range limited group decision(s) spanning some 30 years, while attempting a maximization of strategic and economic return on a large scale investment, turned out to be a near disaster. The fluctuations, particularly in the oil sector, may still present sizeable headache's as mentioned

under Level of Economic Development, even though a "revival came in 1970, (with) the order of two 7,300 ton vessels."⁸⁴ At this time only 2 shipbuilders were still in business.

present action on the original and subsequent decisions regarding shipbuilding becomes one of cutting losses with an overall sub-satisficing effectiveness of the original intent. This particular string of decisions, or decision followed by modification, was a difficult but usefull lesson in the dangers of placing perceived strategic necessities ahead of hard economic realities so vitally important in maritime industry requiring so massive an investment. The opposing advocacy is still quite apparent as it "is" still uncertain whether future demand for large and medium size vessels can justify the heavy cost of investments required."⁸⁵

These are the pitfalls faced by a decision-making body able to cut corners and take short cuts to goals not tested by close examination of opposing viewpoints. Recognition of policy weakness regarding internationalization and self-sufficiency in shipbuilding was recently demonstrated in the RSA's strengthening of its specialized container vessels where the contracting for the four 42,000 dwt vessels was placed with French yards rather than local builders.

C. General Comments on Decision Process

I have loosely spoken of the two previous examples as "decisions" although neither neatly fit into the categories as discussed in seminar. Two other of these nebulous

marine-oriented "decisions" which could be related to the model are the defense policy change starting in 1960, and the statement of South Africa's acceptance of the 200 mile economic and fisheries zone at Caracas in comparison to the voting matrix at the '58 & '60 Geneva Conventions as discussed by Friedman. I have gone through the motions setting these into the decision process and have come up with rather mixed results as with the examples used. In the interest of brevity, they have been omitted.

In general, no decisions have been made on a strictly individual basis, although many employ only a limited number of individuals in the executive council and large industry. Because of the limited access to influential and inside decision-makers, South Africa is able to put through much legislation exceeding the satisficing level; this does not always prove to be profitable in terms of economics. The RSA's delicate position with surrounding Black Africa and the world community in general, dictates that potential friction areas of any magnitude be considered first and foremost from a strategic and military point of view. This was evident in the shipbuilding decision, the defense policy alluded to above, energy considerations, and a good number of foreign policy decisions. I spent a great deal of time on the pollution decision because it demonstrated the workings of the decision-making process as independently as possible from the black box of national security. Many

areas within the realm of marine policy do fall under security considerations, but others, such as future fishing decision etc., I would expect to utilize the non-security route.

IV OUTPUTS

A. Treaties and Agreements:

Following is a summary of marine oriented treaties and agreements to which the RSA is party:

<u>Description</u>	<u>Date of Signing</u>	<u>No. of Other Signatures</u>
1. Convention on Whaling	2/12/46	16
2. Regulations on Whaling	3/3/47	12
3. Convention re Safety of Life at Sea	10/6/48	56
4. Final Act re Safety of Life at Sea	10/6/48	53
5. Exchange re Maritime Traffic	21/11/53	Greece
6. Exchange re Tonnage Measurement	24/3/54	Finland
7. Geneva Convention on High Seas	29/4/58	41
8. Geneva Convention - Territorial Sea & Contiguous Zone	29/4/58	30
9. Geneva Convention- Fishing&Conservation of Living Resources on the High Seas	29/4/58	23

Cont.	Description	Date of Signing	No. of Other Signatures	
10.	Geneva Convention Continental Shelf	29/4/58	35	
11.	Nuclear Test Ban Treaty	5/18/63	81	
12.	Convention Re Safety of Life at Sea	17/6/60	57	
13.	Agreement-Merchant Tonnage Certification	12/6/64	Finland	86

The most Notable omissions here are:

1. 1954-Oil Pollution Convention and amendments of '59 & '62
2. 1969-Brussels Private Law Convention (Liability re Pollution)
3. 1971-Compensation Fund Convention
4. 1971-Intervention Convention
5. 1966-Loadline Convention
6. 1972-Ocean Dumping Convention

It is rather perplexing, considering South Africa's concern with the subject of marine pollution, why at least some of the International legislation dealing with the very guidelines mentioned in the RSA's LOS III requirements for definitions, (eg - very similar to IMCO's and GESAMP) have not been ratified. If over-generality or lax standards due to SA's stand against flags-of-convenience vessels are reason for non-ratification of the earlier conventions, why haven't the later ones been signed, especially when the '71 Oil Pollution Prevention Act bears such close resemblance to '73 London Convention on Prevention of

Pollution by Ships and the '72 Dumping Convention?

One governmental publication passes the buck to explain this paradox to the department of foreign affairs, which in turn, says nothing. Another refers to the "two international conventions... being studied by the relevant government departments with a view toward subsequent ratification." 87

The Loadline Convention, enforcing load limits for ships relative to both conditions and cargo classification was thought to be grossly lax and actually a hazard to the treacherous sea routes around South Africa.

The ratifications of the '58 conventions are self explanatory. Although vague and filled with nebulous parameters such as "reasonable regard," "appropriate measures," "unjustifiable damage," and "harmful agents," it was politically expedient to be a party to these conventions.

Another possibility explaining the relatively few marine treaties to which the RSA is party, could be the unfortunate position of the RSA in the UN itself as well as the host of organizations therein. This is not a strong argument though since low-level or non-participation in LOS activities (as well as IMCO, ICSEAF, and IFC, ICNAF) is certainly not evident.

B. Domestic Status

Underlying any and all considerations of a states external behavior are the people-the domestic base from which a political entity derives its very reason for being. "In understanding any state's foreign policy, it is impossible to divorce external affairs from their domestic base;"⁸⁸ "domestic preoccupations... define and limit the scope of foreign policy and dictate the patterns of national interest - among these social structure, economic and military potential... the ideas its leaders and population have of their country's past, its present, and its place in the future."⁸⁹

No place on earth has borne the extensive scrutiny and hostile criticism as has South Africa's government philosophy of socio-political control exercised on and in the name of the people. Realistically, it is upon this foundation which rests any policy predictions of South Africa's future. Marine orientation becomes a minute item in comparison to the enormity of the task facing the RSA. On the one hand, critics claim that "if economic growth is sacrificed for the almost unattainable goal of complete social and political separation of South Africa, the consequences for all the people, not just the whites, will be grave."⁹⁰ On the other, "the liberal-reformists claim that the racial order will be transformed through a liberalization and rationalization brought on by industrialization,"⁹¹ while yet another school, the so-called radical-revisionists,

claim "countervailing forces... to be overwhelming, that whatever the tendency of industrialization, no significant change will emerge from its progress."⁹²

From the political standpoint, reaction to Vorster's "six months of change" speech mentioned earlier under Bloc Position, the East African Standard stated that "anyone with a modicum of sense will realize that conflict will be inevitable unless the regime... abandons its policy along racial lines,"⁹³ while Vorster, echoing winds of change, comes up with "if there are any of you who flourish hope for one-man-one-vote in the White Parliament, then you are being misled because it will not happen."⁹⁴ Meanwhile the African reserves remain as wretched and overpopulated as ever; in the modern sector, although there has been a considerable increase of African employment, the real incomes of the Africans has hardly increased at all.

Thus the question of Marine Orientation and future policy pales to insignificance against the backdrop of the social situation. That is not to say there is no marine policy, rather, in the light of the domestic situation, it just is not a particularly important problem. Another indicator of the relative importance of policy issues are the contents of opening addresses to Parliament. No mention of marine policy has been evident in these documents for the last 10 years.

C. LOS III Position

Briefly stated, the RSA's actual participation in any of the LOS conventions have not been anything approaching spectacular. J. Hannakom, the chief at the Permanent UN Delegation of South Africa in New York said that "no real contributions" have been made by the RSA mainly as an "avoidance to potential political hassles, but, close communication between the RSA, U.S., G.B., France, West Germany, and Japan were maintained as there "is no use in denying the contacts between these nations."⁹⁵

Two statements were made before Committees II and III on the 7th and 5th of August 1974. The contents of these statements regarding living resources (control of coastal-state fisheries) and pollution control were surprising both from the point of view of being the first utterances in evidence by the ever-present South African delegations at any LOS conferences, and the strength of some of these statements demanding coastal state control over certain activities.

I spent some time studying the voting patterns displayed by South Africa in the 1958 and 1960 Geneva convention. With only two statements giving indication of movement (as voting patterns at Caracas were not available in obtainable literature) only a few general observations are possible.

Of the seven clusters of factors chosen by Friedheim,

only two showed South Africa with a negatively weighted voting pattern indicating a preponderance of nay and abstention votes. One issue was that of fishing and extended control of fishing grounds. While not as negative as those of the distant water fisheries (USSR, UK, Japan, and Scandanavian Countries), the gist was one of a non-compliance with extended jurisdiction over living resources. Conversely, in its LOS III statement the RSA as quoted under Fisheries, appeared strongly sympathetic toward nations whose fish stocks were being decimated by non discriminatory catching methods of foreign fleets, constituting a major change of position. This statement, together with comments regarding pollution control, indicate a feeling that coastal states should have the right for a jurisdictional limits of the greatest possible width over those activities posing threats to that state's resources.

On other aspects regarding living resources, South Africa expressed the right states to share in the resources of other states:

...where the coastal state itself is unable to exploit its fisheries resources fully, other states should be allowed to share... on a non discriminatory basis, ...without necessarily recognizing the so called "traditional fishing rights" of foreign states in the zone, the coastal state should have sole discretion ...and should regulate such fishing activities by means of bilateral and multilateral agreements,

...accomodation of neighboring land-locked states should be effected by means of equitable bilateral agreements. 97

Under a factor grouping called 'Supranationalism,' or the willingness of states to have disputes settled by a 3rd party, the RSA in 1958 and 1960 were fairly positive, along with such states as Japan, France, the U.S., Scandanavia, the Arab Coalition, UK, Canada and others, and opposed by the Soviet Bloc, Peru, Chile, Argentina, and Brazil. Considering the rough handling the RSA has received since that time, as well as a new confidence based on military and economic strength, I would strongly doubt that such a pattern would be in evidence at Caracas or presently, Geneva, and would expect a drastic change in position not supporting a general acceptance of 3rd party dispute settlement. Never-the-less, perhaps as an act of accomodation, the statement was made that "my delegation would like to support the continued activities of the International Fisheries Commission."

As the all-important issues of straits and unimpeded passage through those areas under coastal state jurisdiction were not specifically mentioned, it must assume that the RSA will vote along the lines of the U.S., UK, and USSR allowing unimpeded passage.

In addition, no comment was in evidence in any of the publications covering the goings-on of the UN Seabed

committee.

In general then, I would make the point that where no statements are forthcoming from the usually well-represented South African delegations, a 'following' position of accomodation with her perceived allies can be expected. Where statements are in evidence, they seem to be corrections of perhaps mistaken impressions or changed positions on less-than major items. I do not expect statements forthcoming on unimpeded passage by warships, or extended claims of national sovereignty. On the latter, the question of Namibia's and Walvis Bay's future is too hot - a subject to be touched upon under Claims to Maritime Territory.

D. Naval Activities and Posture

The posture of the South African Navy is what I would describe as restrained power. The recent aquisition of three Dauphine class French submarines together with advanced WASP ASW capabilities, two modern destroyers and numerous lethal surface effect vessels, makes up what Mr. Hannakom of the UN permanent mission described as " the strongest naval presence in the Southern hemisphere." 98

Mention should be made here of the oft-referred to 'Simonstown Naval Agreement' and other attempts by South Africa to become a member in treaty alliances.

Based on the assumption that geographic remoteness was the primary factor precluding the RSA from existing mutual defense arrangements, the government in the 1950's attempted

negotiations to remedy that situation. Results of efforts at the 1951 Nairobi Conference, and the 1954 Dakar Conference (attempting a facilitation of military movement and communication in Africa between the RSA and commonwealth colonial powers) were not encouraging, with "seeds of possible agreement" being the only statement which could be made. Nevertheless, in 1955 a bilateral agreement was reached with UK "to ensure safety, by the joint operations of their respective maritime forces, of the sea routes round southern Africa."⁹⁹ This agreement is still in force although the presence of one British Naval officer at the Simonstown base is all that remains in terms of military representation. Furthermore, in spite of the glowing descriptions of this "major defense alliance," an official of the African UN mission spoke of it as "a source of some controversy recently; being more of a gentleman's agreement and not of any great strategic importance."¹⁰⁰ He conceded the possibility of an end to the arrangement but stressed that the base will remain open to all free nations in time of peace and war.

The point here is that as far as naval posture and activities are concerned, South Africa is on its own, but the availability of the Simonstown base, ("the only fully developed naval base on the African coastline outside of the Mediterranean... with facilities for the most sophisticated visiting warships,")¹⁰¹ is certainly an attractive and non-binding arrangement to the hard pressed

western naval alliances to counter the Soviet buildup in the Mediterranean.

With regard to strong coastal state control of the economic zone, fisheries protection zone, and pollution control zone. championed by the RSA, we can expect strict enforcement by a capable navy of all aspects included in agreements to which South Africa is party. This will include, as mentioned under Fisheries, "where necessary, the impounding of foreign vessels and the prosecution of their crews in the courts of the coastal state." 102

Since the "outward movement" is one of the reconciliation of differences, and accommodation of surrounding states, it is doubtful that navy posture will be one of high visibility, rather a low profile (but well publicized) potential deterrent toward exogenous military pressure emanating from states wishing a military overthrow of the present regime.

E. Claims to Maritime Territory

Following is a summary of present claims to maritime territory and what I have projected to be reasonable demands which will probably materialize in the next 2-5 years. The can of worms element concerns Walvis Bay and Namibia which will be discussed briefly with regards to jurisdictional expectations of the RSA.

1. Territorial Sea

Officially sanctioned by act No. 87 of June, 1963, the present claim to territorial sea is 6

nautical miles. According to the S.A. Permanent UN Mission, South Africa would most favor a 12 nm zone but "would not oppose one of up to 100 nm" if so desired by friends of the Republic. The 12 mile zone would seem to be the most reasonable expectation due to the near unanimous agreement of all but a few states.

2. Economic Zone

According to the same source, an economic zone (not presently in force under that title) including both the sea bed, the water column, and all resources therein, would extend some 200 nm from the baselines used in determining the territorial sea, or to the edge of the continental shelf whichever is the most seaward. The broad shelf on the south coast, plus the Walvis Ridge extending beyond the 200 nm limit, accounts for the latter wish. I would expect that in the interests of international accomodation, the line of 200nm would be accepted.

3. The Continental Shelf

Under provisions of the 1958 Convention, South Africa claims some 475,000 km² of ocean bed to the depths of exploitability as defined in the 1958 Convention.

Included under this figure is the area of Walvis Bay, an area of some 1,124 square miles, a small percentage of the total continental shelf area perhaps, but nevertheless a potentially large bone of contention, in the near future. The paradox here is that Walvis Bay is considered "an integral part of South Africa but which for convenience is administered as part of South West Africa."¹⁰³ The UN General Assembly passed three resolutions

(2145 (XXI) Oct. 27, 1966; 2248.(s-u) May 23, 1967; and 2325 (XXII) Dec. 21, 1967) designed to terminate the mandate granted to the RSA for the governing of South West Africa and set up a UN Council for the territory. These have been categorically declared invalid by the South African government. Officials of the UN mission assured me that independence would be granted to Namibia by 1983 "however there must exist certain agreements whereby the sovereignty of South Africa's over utilization of the sea, the harbor, the rail-ways and natural resources will be guaranteed."¹⁰⁴ These arrangements will not be open for negotiation by the South African government, and, at the same time, certainly will not be acceptable to either the UN or the OAK, not to mention the blacks of Namibia.

While at the UN, I was fortunate enough to get a look at a press release issued by the vice chairman of the National Convention of South West Africa to the effect that the Ovambo political organization (SWAPO) is attempting to gain control of the territory at Independence. It is this organization's contention that "after the defeat of Germany in WWI, the government of South Africa deprived the Africans of the Southern and Central (parts of South West Africa location of the ports of Luderitz and Walvis Bay), areas, driving them to the desert and selling about 90% of their lands to the white farmers who came from South Africa."

105

The RSA, of course, disagrees with this as a power-grab by blacks "traditionally living in the Northern sectors" attempting to consolidate claims to the

southern and central parts of the territory where South Africa does not intend to relinquish control to a black regime. The implications of this regarding South Africa's claims to maritime territory are momentous, as this particular claim of sovereignty could lead to a state of declared war so often referred to by the liberation groups even though, due to both economic and military considerations, they don't stand a chance.

4. Exclusive Fishing and Pollution Zones

Presently a tightly controlled fishing zone of 12 n miles exists in the off-shore areas of the Republic together with a loosely defined sealane system extending 12 n miles from straight baselines drawn from only 9 points along the entire coastline. As discussed, I would expect both of these to be extended to 200 miles in the near future, and under a strict and capable enforcement regime.

F. Conflicts

Other than minor border skirmishes involving Frelimo guerillas, South Africa is not and does not wish to be involved in armed conflicts from surrounding states. What is of importance is the potential of an all-out effort by the independent African states to "liberate" the country from white control.

While pursuing a policy of "outward movement" with a real desire to prevent any sort of armed struggle which would even more seriously jeopardize the South Africa's already shaky position in the international community, the RSA is, at the same time, engaged in the creation of a state impregnable to all but the super powers. This goal has been achieved to a point considering:

- a) the non-likelihood of super power intervention

due to the more current world-wide economic situation,

- b) the existence of other international hot-spots demanding more attention than South Africa, (Middle East, S.E. Asia etc.),
- c) the ineffectiveness of international sanctions attempting to isolate the republic and force internal change,
- d) the increasing demand for mineral raw materials so abundant in the Republic, and
- e) the virtual state of self sufficiency covering all areas (except oil) enjoyed by South Africa.

The above may have made possible the conclusion that "henceforth foreign policy need no longer be exclusively concerned with keeping the apocalypse at bay with a negative and rigid defense of apartheid - rather a possibility of restoring foreign relations to a more normal and orthodox basis."¹⁰⁶

V. CONCLUSIONS AND RELATIONSHIPS TO MARINE ORIENTATION

Christian Potholm, in his detailed examination of nine scenarios dealing with the future of South Africa, covers a wide spectrum of outcomes ranging from a continuation of the status quo to an "exogenously induced alteration of the (existing) system with high levels of coercion."¹⁰⁷ His conclusions are left to the reader, suggesting that for the short-run (5-10 years) the situation will not drastically alter from its present state.

Regarding marine orientation in terms of outputs, I really cannot foresee a drastic change from present moderate positions even should the white minority, by some wild combination of improbable occurrences, be crushed by a coordinated uprising of the blacks both from within and without of the Republic. Generally, the stand on economic zones, (pollution, minerals, living resources otherwise) and territorial sea, do not greatly differ from those of its arch-enemies. Should a state of general war exist, of course, there would be a short run disruption of present standards, to a high-profile, aggressive stand, but this is the nature of war. Should the Black movement succeed in gaining control, other than a naval effort coordinated with, instead of against, surrounding states, I could not see a major deviation from the way things stand presently. Should an initial attempt at aimed coercion by surrounding states end quickly with appalling losses on the part of other

CONFIDENTIAL

African States necessitating a super power intervention, I could see South Africa stripped of its control over Namibia and all but those areas occupied by the whites, but this certainly would not result in extravagant marine claims with the super powers looking on.

It has been said of the Geneva Convention (LOS IV) taking place at this moment that third world states, although not particularly pleased with the prospect, are recognizing the futurity of not allowing unimpeded passage on the high seas. Should this bear out and result in a ratified convention, it would be safe to say that South Africa's position regarding maritime claims would be almost identical to any states with coastal interests in the areas discussed.

Emphasis should be made here that we are talking of outputs, or legislation and policy directing a state's stance in the oceans. Should drastic changes take place in any state, obviously inputs such as GNP, % GNP related to ocean use, would change, some probably greatly; this does not imply a parallel switch in policy per se.

Assuming some rate of re-definition by the white (governing and non-governing) population of South Africa regarding present ideological attitudes is not idle spec-

ulation, but a function of the recognition of a reality which cannot be permanently held down by press control and racial barriers. At the same time, that rate is not instantaneous I therefore can make several marine oriented predictions based on the contents of this analysis for a short-run of 5-10 years:

- a) that military/strategic consideration will remain of paramount importance, and that naval strength of the RSA will increase at a constant proportion of the military budget (15-20%),
- b) that demand for raw materials, and the price of gold will continue to provide a fairly stable basis for the increase of South African trade in her own developing merchant fleet, parallel to substantial expansion of port facilities,
- c) that the RSA will accept and promote a similar stance to LOS issues as the major trading partners - emphasizing strong coastal-state rights in an economic zone of 200 miles, unimpeded passage through straits, international control of the ocean regime beyond 200 n miles,
- d) a rapidly expanding fishing industry as its own fleet takes over catches presently enjoyed by foreign fleets,
- e) that Namibia will be granted independence with certain conditions regarding exploitation and usage rights to resources, marine and other.
- f) A slight lessening of apartheid policies, the emphasis of Bantustaan development and perhaps a slightly improved stance within International Organizations concerned.
- g) Some, none or all of the above.

I feel a tone of glibness slipping in, so here this exposition ends. Following is a weighted scale of just about everything discussed based on my own perception of the whole.

WEIGHTED SCALE OF MARINE POLICY MAKING IN THE REPUBLIC OF SOUTH AFRICA

I. INPUTS

A. Geomaritime Complex	SHORE	20
	SHORE/BOUNDARY	20
	AREA	10
	CONTWO	15
	CONISO	10
	SPPAR	15

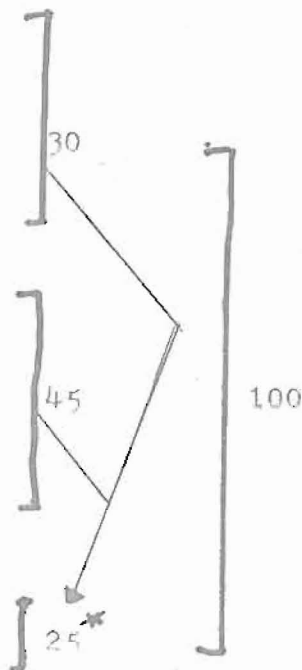
B. Economic Factors

GNP	25
SEATRADE	25
FISH	15
POPUL	15
POPUL/SHORE	10
POPUL/AREA	5
GNP/POPUL	5

C. Objective Strategic

AIDO

-

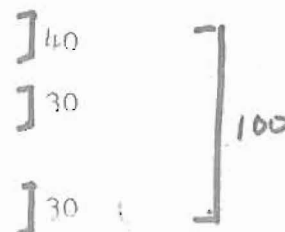


II. PROCESSING

A. Value System

B. Bureaucratic Structure

C. Decision Procedure



III. OUTPUTS

A. Claims, Geomaritime Complex

TERSEA
ECOZON
CONSHF

6nm, 12 OK
None by name, Fish - 12nm, Pollution - 200
'58 Geneva Convention, 200 OK

B. International Arrangements

CONCON
HICON
RISCON
TERCON
IMCO
COMITE

Yes
yes
yes
yes
no
YES (ICC, ICNAP, ICSHAP)

C. Economic

ELATON
SHIBLG
TARIFF
FINEAR
FISPAR

531.8
50.
5-35%
96%
4%

D. Military

NAVSMA 115
NAVTA 100

APPENDIX I

INPUTS: OBJECTIVE, QUANTIFIABLE ATTRIBUTES OF STATES FROM WHICH MARINE POLICY IS FORMULATED

1. SHORE	
Length of shoreline (km)	2,955 km.
2. AREA	
Land area (km ²)	1,221,000 km ²
3. CONSHSELF	
Area of continental shelf	
200 meter isobath	108,260 km ²
200 mile limit	767,930 km ²
4. FISH	
Estimated MSY (metric tons)	2.7 X 10 ⁵
Value, 1973 (total, domestic)	\$154 X 10 ⁶ (50% MSY)
5. POPULATION	
Estimated - 1973	21,700,000
6. GNP - 1973	\$18.2 Billion
7. SEABORNE TRADE VALUE, 1973	\$8.5 Billion
(total imp. & exp. not incl. gold)	
8. SEPAR	.3
9. POP/SHORE	3.671
($\frac{1}{2}$ POP. \div SHORE)	
10. GNP/POP	\$839
11. AREA/POP	18p/km ²
12. SEATRADE/GNP	.47
13. SHORE/BORDER	.523
14. FISH/GNP	.00846 (.8 of 1%)

MODEL OF MARINE POLICY MAKING--VERSION OF APRIL 2ND

APPENDIX II.

INPUTS

(objective, quantifiable attributes of countries from which marine policy is formulated)

1. shoreline length (in km) SHORE
2. area of land (in km ²) AREA
3. area of continental shelf under 200 mile zone (in km ²) CONTWO
4. area of continental shelf within 200 metre isobath (in km ²) CONISO
5. tons of fisheries resources within 200 miles (in 000's) FISH
6. population of country (in 000's) POPUL
7. gross national product (in \$'s x 000,000,000) GNP
8. tonnage of all seaborne trade (in 000) SEATDE
9. separability of territory (defined as the area of geographic units more than 24 miles from the most populous unit divided by the total area) SEPAR
10. POPUL/SHORE
11. POPUL/AREA
12. GNP/POPUL
13. SEATDE/GNP
14. SHORE/total boundary length
15. anything left desparately obligatory ALDO

PROCESSING

(processes by which inputs are changed and modified to produce policy)

V	B	D
A	U	E
L	R	C
U	E	I
E	A	S
	U	I
S	C	O
Y	R	N
S	A	M
T	T	A
E	R	K
M	E	I
		N
		G
		P
		R
		O
		C
		E
		D
		U
		R
		E
		S

OUTPUTS

(objective evidence of marine policy)

1. claimed territorial sea (in nm) TERSEA
2. claimed economic zone (in nm) ECOZON
3. claimed continental shelf (in nm) CONSHE
4. status re 1958 Continental Shelf Convention CONCON
5. status re 1958 High Seas Convention HICON
6. status re 1958 Fisheries Convention FISCON
7. status re 1958 Territorial Seas Convention TERCON
8. status re 1954 IMCO Convention IMCO
9. membership in regional fisheries commissions COMMIS
10. tonnage of small naval vessels (in 000's) NAVSMA
11. tonnage of large naval vessels (in 000's) NAVLAR
12. merchant shipping-- total flag tonnage (in 000's) FLATON
13. ship building-- tons per year (in 000's) SHIBLG
14. tariff rates (average in %) TARIFF
15. tons of fish caught within 200 nm of coast (in 000's) FINEAR
16. tons of fish caught outside 200 nm of coast (in 000's) FISFAR
17. position re economic zone ECOZON

NOTES

1. Irving Kaplan et al., Area Handbook for the Republic of South Africa, (Washington D.C.: U.S. Government Printing Office, 1971), p.V.
2. Amry Vanden Bosch, South Africa and the World, (Lexington, Kentucky: University of Kentucky Press, 1970), p.4.
3. J.E. Spence, Republic Under Pressure, A Study of South African Foreign Policy, (London: Oxford University Press, 1965), p.7.
4. Alvin J. Cottrell, and R.M. Burrell, The Indian Ocean: Its Political, Economic and Military Importance, (New York: Praeger Publishers, 1972), p.267.
5. Department of Information, Official Yearbook of the RSA, (Johannesburg: Peskor Printers, 1974), p.41.
6. John King Gamble, Jr., Global Marine Attributes, (Cambridge: Ballinger Publishing Co., 1974) pp.10-208.
7. Legal and General Assurance Society Ltd, State of South Africa, Yearbook 1974, (Johannesburg: Da Gama Publishers (PTY.) Ltd, 1974), p.20.
8. Official Yearbook of the RSA, p.20.
9. Ibid. p.43.
10. Arnold W. Reitze, Environmental Planning: Law of Land and Resources, (Washington D.C.: North American International, 1974), p.20-3.
11. Office of the Geographer, International Boundary Study, (Washington D.C.: Bureau of Intelligence Research, 1972), p.27.

12. CHEER UP - ONLY 57 MORE PAGES!!
13. a) William R. Duggan, A Socioeconomic Profile of South Africa, (New York: Praeger Publishers, 1973), p.4.
b) State of South Africa, Yearbook 1974, p.46.
14. Area Handbook for the RSA, pp.112-113.
15. United Nations, Food and Agricultural Organization, Yearbook of Fisheries Statistics, Vol.34. Catches and Landings, 1972, p.17.
16. Francis T. Christy, Disparate Fisheries: Problems for the Law of the Sea Convergence and Beyond, (Washington: Resources for the Future, 1972,)p.342.
17. The South African Shipping News and Fisheries Review, July 1974, p.57.
18. South Africa is a member of ICSEAF, ICNAF, and the IFC.
19. The South African Shipping News and Fisheries Review, March, 1974.
20. Ibid.
21. R.L. Friedheim, "Factor Analysis as a Tool in Studying the Law of the Sea," in L.M. Alexander (ed.) The Law of the Sea: Offshore Boundaries and Zones, (Columbus: Ohio State Univ. Press, 1967), pp.48-69.
22. Matthys Botha, Statement Before Committee II, Third UN Conference on the Law of the Sea: 7 August 1974, pp.2-3.
23. Oxford Economic Atlas of the World, 4th ed., 1972, General Statistics, p.209.
24. Duggan, p.81.
25. All statistics unless otherwise noted from:

South African Railways and Harbours, Annual Report 1972-1973, (Capetown: Cape and Transvaal Printers Ltd, 1973) pp.71-79.

26. Yearbook of International Trade Statistics, (New York: United Nations Printers, 1974), p.757.
27. "Through the Length of Africa, Change and Uncertainty," New York Times, 26 January, 1975, Sec. F, p.84.
28. Smit, in The Indian Ocean: its Political, Economic and Military Importance, p.269.
29. Douglas Johnston and Edgar Gold, The Economic Zone in the Law of the Sea, (Kingston, R.I., The Law of the Sea Institute Occasional Paper Series, (No.17-June 1973), p.49.
30. Official Yearbook of the RSA, p.41.
31. Smit, in The Indian Ocean: its Political, Economic and Military Importance, pp.271-272.
32. State of South Africa, Yearbook 1974, p.26.
33. Africa South of the Sahara, 1974, (London: Europa Publications Ltd. (1974), p.283.
34. Area Handbook for the Republic of South Africa, p.26.
35. J.E. Spence, "The Outward Movement," Dale and Potholm (eds.), South Africa in Perspective, (N.Y.: The Free Press, 1972), p.54.
36. Vanden Bosch, p.133.
37. James Barber, South Africa's Foreign Policy 1945-1970, (London: Oxford University Press, 1973), p.303.
38. South Africa, Parliament, Minutes of Proceedings

of the Senate, Third Senate, Second Session, Minute 1, 1972.

39. Petersen, in South Africa in Perspective, p.297.
40. Cottrell, and Burrell, p.268.
41. Duggan, p.93.
42. "Political Relations Between African States," Africa Research Bulletin, (Oct. 1-31, 1974): pp.3387-3389.
43. "Southern Africa, Hopes for Detente," Africa Research Bulletin, (November 1-30, 1974): pp.3420-3422.
44. Ibid
45. J.E. Spence, "The Outward Movement," in Southern Africa in Perspective, p.55.
46. Marcelle Kooy, ed., Studies in Economics and Economic History, (Durham, N.C.: Duke University Press, 1972), p.46.
47. Duggan, p.66.
48. Walter Rostow, Capital Formation and Economic Growth, (N.Y.: National Bureau for Economic Research, 1955), p.83.
49. South Africa, Parliament, Minutes of Proceedings of the Senate, Third Senate, Fourth Session, Minute 1, (1974).
50. Helen Suzman, longtime critic of John Vorster, and member of anti-apartheid Progressive Party, in New York Times, 20 Nov. 1974, p.18.
51. "A dilemma for the South Africans on Race," New York Times, 20 November, 1974, p.18.
52. Kooy, p.19.

53. Oxford Economic Atlas, p.209.
54. Official Yearbook of the RSA, p.371.
55. There seems to be some conflict with figures on this particular statistic according to UN and South African sources.
56. Barber, p.198.
57. South Africa, Minutes of Proceedings of the Senate, Third Senate, Fourth Session, Minute 1, 1974.
58. Peterson, in South Africa in Perspective, pp.300-301.
59. For Complete Details see International Institute for Strategic Studies, The Military Balance, 1973-1974. (London: IISS), 1974.
60. Spence, Republic Under Pressure, p.7.
61. Duggan, p.90.
62. Ibid.
63. Annual Report of the South African Railways and Harbours, p.131.
64. Ibid.
65. Nautical Magazine, Feb. 1975.
66. Colin Legum, Ed., Contemporary Record, 1973-1974, (New York: Africana Publishing Co., (1974).
67. Oceanographic Information Services Directory, A Country by Country of Agencies re Marine Science Activities.
68. National Committee on Oceanographic Resources, "Oceanography in South Africa," in SANCOR Symposium 4-6 August, 1974, (Pretoria: 1970).
69. Morton Halperin and Arnold Kanter, READINGS.

- in American Foreign Policy. (Boston: Little, Brown and Co., 1973.) p.46.
70. Graham Allison, Essence of Decision, (Boston: Little, Brown and Company, 1973), p.27.
71. Barber, p.348.
72. New York Times, 20 November, 1974, p.18.
73. Bostwick Ketchum, ed., The Water's Edge, (Cambridge: MIT Press, 1972), p.24.
76. South Africa, Department of Planning and the Environment, Pollution Report, 1971, p.XXI
77. Ann Darracot, Water Pollution Legislation, (Pretoria: The Government Printer, 1974), p.4-5.
78. Ibid.
79. South Africa, Parliament, Minutes of Proceedings of the Senate, Third Senate, Third Session, Minute 1, (1973).
80. Matthys Botha, Statement Before Committee III. Third UN Conference on the Law of the Sea: 5 August 1974. pp.1-2.
81. Official Yearbook of the RSA, p.457.
82. State of South Africa, Yearbook, p.185.
83. Area Handbook for the RSA, p.575.
84. Official Yearbook of the RSA, p.460.
85. Area Handbook for the RSA, p.576.
86. John King Gamble, Jr., Index to Marine Treaties Registered with the United Nations. (Seattle: University of Washington, 1971), p.43.
87. South Africa, Department of Planning and the Environment, Omgewing, RSA, 1974, p.6-7.

88. Barber, p.3.
89. J.E. Spence, and Elizabeth Thomas, South Africa's Defense, (Los Angeles: U.C.L.A. Security Studies Project (1966)), p.30.
90. H. Oppenheimer, "South Africa After the Election," African Affairs, #73, (October, 1974), pp.399-407.
91. Ibid.
92. Ibid.
93. Africa Research Bulletin, Oct. 1-31, p.3389.
94. Africa Research Bulletin, Nov. 1-30, p.3422.
95. Interview with J. Hannakom, Head of Permanent South African Mission to the U.N., N.Y., 8 January 1975.
97. Matthys Botha, Statement Before Committee II, 7 August 1974.
98. Interview.
99. Vanden Bosch, p.287.
100. Interview
101. Official Yearbook of the RSA, p.455.
102. See under Fisheries p.9.
103. State of South Africa, Yearbook, p.298.
104. Interview.
105. Interview.
106. Barber, p.50
107. Potholm, South Africa in Perspective, p.321-331.

BIBLIOGRAPHY

A. BOOKS

1. Barber, James. South Africa's Foreign Policy 1945-1970. London: Oxford University Press, 1973.
2. Cottrell, Alvin J., and Burrell, R.M., eds. The Indian Ocean: Its Political, Economic and Military Importance. New York: Praeger Publishers, 1972.
3. Dale, Richard, and Potholm, Christian P., eds. South Africa in Perspective. New York: The Free Press, 1972.
4. Duggan, William Redman. A Socioeconomic Profile of South Africa. New York: Praeger Publishers, 1973.
5. Friedmann, Wolfgang. The Future of the Oceans. New York: George Braziller, Inc., 1971.
6. Kaplan, Fruing; McLaughlin, James; Marvin, Barbara; Nelson, Harold; Rowland, Ernestine; and Whitaker, Donald. Area Handbook for the Republic of South Africa. Washington D.C.: U.S. Government Printing Office, 1971.
7. Kooy, Marcelle, ed. Studies in Economics and Economic History. Durham, N.C.: Duke University Press, 1972.
8. Vanden Bosch, Amry. South Africa and the World. Lexington, Kentucky: University of Kentucky Press, 1970.

B. GOVERNMENT PUBLICATIONS

1. Darracot, Ann. Water Pollution Legislation. Pretoria: The Government Printer. 1974.
2. Department of Industries. Annual Report 1970. Pretoria: The Government Printer. 1970.

3. Department of Information. Official Yearbook of the RSA. Johannesburg: Peskor Printers. 1974.
4. South Africa. Department of Planning and the Environment. Pollution Report, 1971 (1974).
5. South Africa, Department of Planning and the Environment. Omgewing, 1974. p. 6-7
6. South African National Commission of Oceanographic Research. Oceanography in South Africa. Pretoria: SANCOR, 1970.
7. South Africa. Parliament. Minutes of Proceedings of the Senate. Third Senate. Second Session. Minute 1. 1972.
8. South Africa. Parliament. Minutes of Proceedings of the Senate. Third Senate. Third Session. Minute 1. 1973.
9. South Africa. Parliament. Minutes of Proceedings of the Senate. Third Senate. Fourth Session. Minute 1. 1974.
10. South African Railways and Harbours. Annual Report 1972 - 1973. Capetown.: Cape and Transvaal Printers Ltd. 1973.
11. U.S. Department of the Interior. Office of the Geographer. Limits in the Seas No. 36. National Claims to Maritime Jurisdiction. Revised April 1, 1974.

C. UN. AND INTERNATIONAL STUDIES

1. Africa South of the Sahara, 1974. London: Europa Publications Ltd., (1974).

2. International Institute for Strategic Studies. The Military Balance, 1973 - 1974. London: International Institute for Strategic Studies, 1974.
3. International Monetary Fund. International Financial Statistics. Washington: IMF, 1975.
4. International Institute for Strategic Studies. The Military Balance, 1973 - 1974. London: 1974.
5. United Nations. Food and Agricultural Organization. Yearbook of Fisheries Statistics. Vols. (34.) (35.) Catches and Landings, 1972. Vol. 34 Fishery Commodities, 1972. Vol. 35.
6. United Nations. Unit on Apartheid. Military and Police Forces in the Republic of South Africa (ST/ PSKA/ SER. A/3,A/ AC.115/ L 203 - 204), July 1967.

D. GENERAL REPORTS, AND INDEXES

1. Spence, J.E. Republic Under Pressure, A Study of South African Foreign Policy. London: Oxford University Press, 1965.
2. Spence, J.E., and Thomas, Elizabeth. South Africa's Defense. Los Angeles: U.C.L.A. Security Studies Project, (1966).
3. Gamble, John King, Jr. Index to Marine Treaties Registered with the United Nations. Seattle: University of Washington, (1971).
4. Legal and General Assurance Society Ltd. State of South Africa, Yearbook 1974. Johannesburg.: Da Gama Publishers (PTY.) Ltd., 1974.

5. Legum, Colin. Ed. Contemporary Record, 1973 - 1974.
New York: Africana Publishing Co., (1974).

E. MAGAZINES, PERIODICALS, AND NEWSPAPERS

1. "Southern Africa, Hopes for Detente." Africa Research Bulletin, November 1 - 30, 1974, pp. 3420-3422.
2. "Momentous Times for Southern Africa." African Development, February 1975, pp. 14-15.
3. Oppenheimer, H. "South Africa After the Election." African Affairs #73, October 1974, pp. 399-407.
4. "A Dilemma for the South Africans on Race." New York Times. 20 November, 1974. p.18.
5. "South African Foe of Apartheid Calls UN Ruling Unwise." New York Times. 20 November, 1974. p.18.
6. "Through the Length of Africa, Change and Uncertainty." New York Times. 26 January, 1975. Sec. F, p.84.

F. INTERVIEW

1. Hannakom, J. Head, Permanent South African Mission to the UN. New York City. Interview 8 January, 1975.

G. MISCELLANEOUS

1. Allison, Graham. Essence of Decision. Boston: Little, Brown and Co., 1973.
2. Botha, Matthys. Statement Before Committee II,III.
Third United Nations Conference on the Law of the

Sea: 7 August 1974, pp.2-3.

3. Christy, Francis T. Disparate Fisheries: Problems for the Law of the Sea Conference and Beyond. Washington: Resources for the Future Inc. 1972.
4. Friedheim, R.L. "Factor Analysis as a Tool in Studying the Law of the Sea." In L.M. Alexander (ed.), The Law of the Sea: Offshore Boundaries and Zones. Columbus: Ohio State Univ. Press, 1967.
5. Gamble, John King, Jr. Global Marine Attributes. Cambridge: Ballinger Publishing Co., (1974).
6. Halperin, Morton H., Kanter, Arnold. Readings in American Foreign Policy. Boston: Little, Brown, and Co., 1973.
7. Johnston, Douglas, and Gold, Edgar. The Economic Zone in the Law of the Sea: Survey, Analysis and Appraisal of Current Trends. Kingston, R.I.: The Law of the Sea Institute Occasional Paper Series. (no.17-June 1973).
8. Ketchum, Bostwick, (ed.), The Water's Edge. Cambridge: MIT Press, 1972.
9. National Committee on Oceanographic Resources. "Oceanography in South Africa." In SANCOR Symposium, 4-6 August, 1970. Pretoria: 1970.
10. Oxford Economic Atlas of the World, 4th ed., 1972. General Statistics.
11. Reitze, Arnold W. Environmental Planning: Law of Land and Resources. Washington D.C.: North American International, 1974.
12. Rostow, Walter. Capital Formation and Economic Growth. N.Y.: National Bureau for Economic Research, 1955.
13. Yearbook of International Trade Statistics. 1974 ed.

New York: United Nations Printers, 1974.

14. Oceanographic Information Services Directory.
A Country by Country Directory of Agencies
re Marine Science Activities.